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THE ANTS OF TRINIDAD

BY WILLIAM MORTON WHEELER



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THE ANTS OF TRINIDAD¹

BY WILLIAM MORTON WHEELER

Since the publication of my paper (Bull. Mus. Comp. Zool., LX, 1916, pp. 323-330, 1 fig.) on the ants collected in Trinidad by Prof. Roland Thaxter I have seen considerable additional material from the same locality. Dr. F. E. Lutz has recently sent me for study a series of specimens taken by Mr. P. B. Whelpley and contributed to The American Museum of Natural History, and Mr. F. W. Urich has sent me several interesting forms, among them a singular cave-ant which proves to belong to an undescribed genus. I have also found some species hitherto unrecorded from the island in a vial of miscellaneous sweepings received from Prof. Thaxter. During July 1920, while on my way to British Guiana, I was able, through the courtesy of Mr. W. G. Freeman, Director of Agriculture, Department of Trinidad and Tobago, to collect a number of species in the Botanical Garden near Port of Spain and at Caroni and Diego Martin. After studying this additional material it seems advisable to list the Formicidæ known to occur in the island. I have therefore included all the older records of species taken by Mr. Urich and Prof. Forel, who collected at Port of Spain while on his voyage to Colombia in 1896. The nearly 150 different forms taken to date furnish additional proof, if it were needed, that the ant fauna of Trinidad, unlike that of the various Windward Islands and Tobago, is in great part identical with and probably quite as rich as that of the adjacent Venezuelan coast.

FORMICIDÆ

Dorylinæ

Eciton burchelli Westwood.—Port of Spain, (R. Thaxter), ♂, ♀; Diego Martin, (Wheeler), ♂, ♀.

Eciton burchelli var. **urichi** Forel.—Trinidad, (Urich); Port of Spain, (R. Thaxter), ♂, ♀; Caparo and Port of Spain, (P. B. Whelpley), ♀.

Eciton (Labidus) crassicornis F. Smith.—Matura, (Urich); Port of Spain, (R. Thaxter); Caparo and Port of Spain, (P. B. Whelpley), ♀.

¹Contributions from the Entomological Laboratory of the Bussey Institution, Harvard University. No. 207.

Eciton (Acamatus) pilosum F. Smith.—Aripa Savanna, (R. Thaxter); Port of Spain, (P. B. Whelpley), ♀.

Eciton (Acamatus) adnepos, new species¹

WORKER.—Length, 1.5–1.7 mm.

Practically monomorphic. Head subrectangular, nearly one-third longer than broad, slightly broader in front than behind, its sides very feebly and evenly convex, its posterior border broadly and deeply excised, its posterior corners rounded. Eyes represented by minute white spots at the middle of the sides. Mandibles short, narrow, their apical borders not very oblique, straight, somewhat acute at the tip but toothless. Clypeus very short and depressed, its anterior border very feebly sinuate in the middle. Antennæ stout, scapes reaching the middle of the head, incrassate apically; first funicular joint a little longer than broad, succeeding joints, especially the basal, strongly transverse, the ninth and tenth nearly as long as broad, the terminal twice as long as broad and blunt at the tip. The three last joints really form a club. Thorax narrow, laterally compressed; the pro- and mesonotum together three times as long as the base of the epinotum, very feebly and evenly convex, the pronotum with a strong transverse carina just behind the neck. Mesoepinotal constriction feeble but distinct; epinotum small, its base, apart from the constriction, continuing the dorsal curve of the pro- and mesonotum and separated on each side from the short and concave declivity by a small angle; the sides of the declivity submarginate. Petiole about one and one-half times as long as broad, very convex above, with a large blunt protuberance at its anterior ventral end. Postpetiole slightly broader than long, but little broader than the petiole and less convex above, with a small, acute, transverse anteroventral projection. Gaster smaller than the head, elongate-elliptical. Legs rather stout; tarsal claws simple.

Very smooth and shining, except the meso- and metapleuræ which are very finely punctate and slightly opaque. Mandibles sparsely and finely punctate, piligerous punctures on the remainder of the body very minute and scattered.

Hairs pale yellow, uneven, rather short, coarse, moderately abundant, erect or suberect both on the body and appendages.

Head and thorax yellowish red; mandibles and meso- and metapleuræ darker; petiole, postpetiole, gaster, antennæ and legs yellow.

Described from 15 specimens taken from a small army which I found traversing the threshold of one of the fern-houses in the botanical garden at Port of Spain.

This minute species is quite distinct from any known to me in nature or from descriptions in the shape of the head, mandibles, pedicel, etc.

PONERINÆ

Platythyrea angusta Forel.—Trinidad (type-locality), ♀.

Prionopelta punctulata Mayr subsp. **antillana** Forel.—Savanna, (A. Forel), ♀.

¹Types of new species described in this paper will be deposited in The American Museum of Natural History.

- Ectatomma tuberculatum** Olivier.—Port of Spain and Sangre Grande, (R. Thaxter), ♂; Botanical Garden, Port of Spain, (Wheeler), ♂.
- Ectatomma ruidum** Roger.—Port of Spain, (R. Thaxter), ♂; Chaguanas, (Urich), ♂; Botanical Garden, Port of Spain, (Wheeler), ♂.
- Ectatomma (Gnamptogenys) concinnum** F. Smith.—Caparo, (P. B. Whelpley), ♀.
- Ectatomma (Holcoponera) brasiliense** Emery.—Port of Spain, (P. B. Whelpley), ♂.
- Ectatomma (Holcoponera) striatulum** Mayr var. **pleurodon** Emery.—Trinidad, (Urich), ♂.
- Neoponera obscuricornis** Emery var. **latreillei** Forel.—Caura, (Urich), ♂.
- Neoponera unidentata** Mayr.—Port of Spain, (R. Thaxter), ♂.
- Pachycondyla crassinoda** Latreille.—Port of Spain, (R. Thaxter), ♂, ♀; Caparo, (P. B. Whelpley), ♂.
- Pachycondyla harpax** Fabricius.—Port of Spain, (R. Thaxter), ♂.
- Pachycondyla impressa** Roger.—Port of Spain, (R. Thaxter), ♂; Botanical Garden, (Wheeler), ♂.
- Euponera (Mesoponera) constricta** Mayr.—Trinidad, (A. Forel), ♂; Port of Spain, (R. Thaxter), ♂, ♀; Montserrat, (Aug. Busck), ♀.
- Euponera (Mesoponera) lævigata** F. Smith variety **whelpleyi**, new variety ✓^v
- A single worker taken by P. B. Whelpley at Caparo seems to represent a distinct variety of this rare ant. Each side of the petiole has a large and conspicuous patch of parallel striæ like those on the sides of the epinotum but slanting from above downwards and backwards. I find no mention of these striæ in Smith's original description or in Emery's re-description of the typical form under the name of *Pachycondyla gagatina*.
- Euponera (Trachymesopus) stigma** Fabr.—Port of Spain, (R. Thaxter), ♂, ♀.
- Ponera opaciceps** Mayr.—Aripa Savanna, (R. Thaxter), ♂.
- Ponera trigona** Mayr var. **opacior** Forel.—Port of Spain, (R. Thaxter), ♂, in sweepings.
- Leptogenys unistimulosa** Roger var. **trinidadensis** Forel.—Trinidad, (Urich), type locality, ♂.
- Anochetus inermis** Ern. André.—Trinidad, (A. Forel), ♂, ♂.
- Anochetus inermis** var. **meinerti** Forel.—Chaguanas, (Urich), ♂; Port of Spain, (R. Thaxter), ♂, ♀, ♂.
- Anochetus targionii** Emery.—Caparo, (P. B. Whelpley), ♂.
- Anochetus (Stenomyrmex) emarginatus** Fabr.—Trinidad, (Urich), ♂; Port of Spain, (R. Thaxter), ♂; Ariopita Valley, (B. D. Chipman), ♂.

Odontomachus hæmatoda L.—Port of Spain, Gasparee Island and Sangre Grande, (R. Thaxter), ♂, ♀; Botanical Garden, Port of Spain, (Wheeler), ♂.

Odontomachus hæmatoda subsp. *insularis* Guérin var. *hirsutiusculus* F. Smith.—Port of Spain, (R. Thaxter), ♂.

Odontomachus hæmatoda L. subsp. *meinerti* Forel.—Port of Spain, (R. Thaxter), ♂.

Pseudomyrminae

Pseudomyrma championi Forel var. *paulina* Forel.—Port of Spain, (Aug. Busck; R. Thaxter), ♂.

Pseudomyrma elegans F. Smith subsp. *breviceps* Forel.—Savanna, (A. Forel), type-locality, ♂; Trinidad, (A. Busck), ♂; Botanical Garden, Port of Spain, (Wheeler), ♂.

Pseudomyrma elongata Mayr.—Trinidad, (A. Forel), ♂; Port of Spain, (P. B. Whelpley), ♂.

Pseudomyrma flavidula F. Smith.—Port of Spain, (P. B. Whelpley), ♂.

Pseudomyrma gracilis Fabr.—Port of Spain, (P. B. Whelpley), ♂; Botanical Garden, Port of Spain, (Wheeler), ♂.

Pseudomyrma culmicola Forel.—Trinidad, (A. Forel), type-locality, ♂.

Pseudomyrma excavata Mayr.—Port of Spain, (R. Thaxter), ♂; Botanical Garden, Port of Spain, (Wheeler), ♂.

Pseudomyrma filiformis Fabr.—Trinidad, (Urich), ♂.

Pseudomyrma kuenckeli Emery.—Trinidad, (Urich); Botanical Garden, Port of Spain, (Wheeler), ♀.

Pseudomyrma nigropilosa Emery subsp. *laticeps* Forel.—Trinidad, (A. Forel), type-locality, ♂.

Pseudomyrma pallida F. Smith.—Aripa Savanna, (R. Thaxter), ♂; Trinidad, (Urich), ♂.

Pseudomyrma icterica, new species

WORKER.—Length, nearly 6 mm.

Head subrectangular, about one-fifth longer than broad, as broad in front as behind, with feebly convex sides and feebly and broadly excised posterior border; in profile convex above and below. Mandibles moderately convex, with two larger apical and several minute basal teeth. Clypeus bluntly carinate behind, its border broadly sinuate on each side, with a distinct rectangular lobe, rounded at the corners. Frontal carinae small, closely approximated; frontal groove feeble. Eyes moderately large and convex, about two-fifths the length of the sides of the head. Antennal scapes reaching the middle of the head; first funicular joint a little longer than broad, second broader than long, remaining joints slightly longer than broad, terminal joint longer. Thorax rather narrow; the pro- and mesonotum together a little longer than the epinotum; the mesoepinotal constriction abrupt, rather long and deep, its im-

pressed surface longitudinally striated. Pronotum as long as broad, with rather flattened sides, rounded above and at the humeri. Mesonotum semicircular, broader than long. Epinotum with the base sloping backward, twice the length of the declivity into which it passes through a rounded obtuse angle. Petiole stout, with short peduncle and thick node, the latter rising rather abruptly in front. Seen from above it is as broad as long, with rounded sides and posterior border and straight anterior border; the sides almost submarginate, the ventral surface with a very small acute, downwardly directed spine near its anterior end. Postpetiole nearly a third again as broad as the petiole, broader than long, narrowed and constricted anteriorly, its sides posteriorly and its dorsal surface convex and rounded. Gaster rather large, of the usual shape. Fore femora dilated and somewhat flattened and rhomboidal; hind femora somewhat swollen.

Mandibles opaque, striatopunctate apically, smoother at the base; remainder of the body smooth and shining; anterior half of head finely and rather densely punctate and subopaque, punctures on the remainder of the body sparse and very fine.

Hairs pale yellow, very sparse, erect, rather evenly scattered over the head, thorax and abdomen; pubescence very fine and dense on the gaster but apparently lacking elsewhere.

Yellow; teeth and borders of mandibles, postpetiole, and gaster, except at last segment, brown; the second and third segments of the gaster darker. Legs somewhat paler than the head and thorax.

A single specimen taken by Mr. August Busck at Port of Spain. I describe this and the following species as new because they are distinctly different from any of the forms of which I have seen specimens or descriptions.

***Pseudomyrma auripes*, new species**

FEMALE (dealtated).—Length, about 8 mm.

Head subrectangular, about one-sixth longer than broad, slightly narrowed in front, with rounded sides and posterior corners and nearly straight posterior border, in profile somewhat flattened in the frontal region. Mandibles stout, flattened, with a pronounced protuberance, or knee, in the outer border near the base; apical border with two strong terminal and no basal teeth. Clypeus carinate in the middle, broadly notched on each side, the median lobe long and narrow with acute corners. Frontal carinae rather long and not closely approximated; frontal groove very fine and indistinct. Eyes rather flat, only about one-third as long as the sides of the head. Antennal scapes short, thickened distally, reaching only to the margins of the cheeks when placed transversely; first funicular joint one and one-half times as long as broad, remaining joints, except the last, twice as broad as long, except the second joint which is less abbreviated. Thorax long, narrower through the wing-insertions than the head. Epinotum in profile with the base but little longer than the declivity. Petiole short, scarcely twice as long as broad, the peduncle very indistinct, the node evenly rounded, broadest just behind the middle, bluntly submarginate above on the sides below and anteriorly with a large, flattened, hook-like, downwardly and backwardly directed spine. Postpetiole about one-fourth broader than the petiole, broader than long, hemispherical, not constricted anteriorly but evenly convex and rounded dorsally and laterally. Its ventral surface is also convex and bears a small,

acute tooth at the anterior end. Gaster elongate, the pygidium pointed, the hypopygium laterally compressed. Legs stout.

Smooth and shining; the mandibles coarsely rugose-punctate. Anterior portion of head very finely and superficially, the remainder of the body much more sparsely punctate.

Hairs pale yellowish, pubescence whitish; the former sparse and erect, short on the head, longer and more abundant on the pedicel and gaster. Pubescence very dilute and indistinct, except on the sides of the epinotum where it is sufficiently dense to give the surface a pruinose appearance.

Black; mandibles, sides of clypeus and borders of cheeks castaneous; antennæ, wing-insertions, tips of femora, tibiae, tarsi, spine on ventral surface of petiole, and ventral and lateral borders of gastric segments, yellow; antennal scapes and median portions of middle and hind tibiae brown.

Described from a single specimen which I found running on a tree-trunk in the Botanical Garden near Port of Spain. This species is apparently related to the series of plant-inhabiting *Pseudomyrmas* comprising *Ps. arboris-sanctæ* Emery, *latinoda* Mayr, *tachigaliæ* Forel, *damnosa* Wheeler, *triplaridis* Forel, etc.

Myrmicinae

Pheidole biconstricta Mayr subsp. *socrates* Forel.—Trinidad, (Urich), ♂, ♀.

Pheidole cornutula Emery.—Botanical Garden, Port of Spain, (Wheeler), ♂.

Pheidole subarmata Mayr var. *borinquenensis* Wheeler.—Botanical Garden, Port of Spain, (Wheeler), ♂.

Pheidole fallax Mayr subsp. *jelskii* Mayr.—Trinidad, (Urich, Forel), ♂, ♀.

Pheidole fallax subsp. *jelskii* Mayr var. *antillensis* Forel.—Botanical Garden, Port of Spain, (Wheeler), ♂, ♀.

Pheidole flavens Roger subsp. *gracillior* Forel.—Trinidad, (A. Forel), ♂, ♀.

Pheidole flavens subsp. *sculptior* Forel.—Trinidad, (Urich), ♂, ♀.

Pheidole susannæ Mayr subsp. *obscurior* Forel.—Trinidad, (A. Forel).

Pheidole lacerta, new species

SOLDIER.—Length, 2.3 mm.

Closely related to *Ph. bicornis* Forel of Panama. Head about one-fifth longer than broad, as broad in front as behind, its anterior angles small and very acute, the sides feebly convex, the posterior border rather deeply excised, but the occipital groove short and shallow; the frontal groove absent. Eyes rather small and feebly convex, at the anterior fourth of the sides. Gula in front with two prominent teeth. Mandibles not very convex, with two larger apical and two minute basal teeth. Clypeus short, concave and ecarinate, its anterior border nearly straight in the middle. Frontal carinae large, suberect and prominent, but not acute, forming the inner borders of distinct, though flattened scrobe-like depressions. Antennæ small and slender;

scapes not incrassated and not reaching to the middle of the sides of the head; club as long as the remainder of the funiculus; joints 2-8 very short, transverse and subequal. Pro- and mesonotum together forming a subhemispherical mass with indistinct humeri; the declivity of the mesonotum with a very feeble indication of a transverse torus behind; mesoepinotal constriction pronounced. Epinotum small, longer than broad, the base in profile horizontal and distinctly longer than the sloping declivity, the spines short and acute, directed upward and outward and slightly backward. Petiole from above scarcely broader behind than in front, the node with a transverse, entire border. Postpetiole about half again as broad as the petiole, broader than long and broadest in front where its sides are bluntly angular. Gaster elongate-elliptical, as large as the head. Legs rather short and not very robust.

Mandibles and clypeus smooth and shining, the former with small scattered, elongate punctures. Head and thorax subopaque, the head transversely rugose above, more reticulate-rugose laterally and in the occipital region, the scrobes finely and densely punctate. The gula is also reticulate but more loosely and finely and its sides are smooth and shining. Thorax and petiole very finely and densely punctate, the pronotum also transversely rugulose above. Postpetiole, gaster and legs smooth and shining, with fine, sparse, piliferous punctures.

Hairs yellowish, delicate, short and suberect on the head and moderately abundant, erect and much longer on the thorax, pedicel and gaster, very short and appressed on the appendages.

Ferruginous red; antennae and legs yellow.

A single specimen swept from foliage near Port of Spain by Prof. Roland Thaxter.

This species, though closely related to *Ph. bicornis* Forel, seems, nevertheless, to be sufficiently distinct. The Central American species is considerably larger (3.2-3.3 mm.), its clypeus is carinate, its frontal carinae are pointed as in *Ph. cornutula*, the humeri of the pronotum are more pronounced, the petiolar node is emarginate at the summit, the sculpture is coarser, especially on the thorax, and the color is paler.

***Pheidole tenerescens*, new species**

SOLDIER.—Length, 2.2 mm.

Allied to *Ph. minutula* Mayr. Head large, rectangular, scarcely longer than broad, as broad in front as behind, with straight, parallel sides, the posterior border somewhat more deeply excised than in *minutula*, the dorsal and gular surfaces decidedly less convex. Occipital groove very short and shallow; frontal groove absent. Gula anteriorly with two small, acute teeth. Mandibles convex, with two distinct apical teeth. Clypeus moderately convex in the middle but ecarinate, the anterior border straight. Eyes small and rather flat, nearly circular, near the anterior fourth of the head. Frontal area large, shallow, subelliptical. Frontal carinae short, diverging. There are no scrobes nor scrobe-like depressions for the antennae. The latter are slender; scapes reaching nearly to the middle of the sides of the head; the funiculi long, the club as long as the remainder of the funiculus, joints 2-8 small, distinctly shorter than long. Thorax shaped much as in *minutula*; the pro- and mesonotum together forming a large hemispherical mass, with distinct though blunt humeral angles; the mesonotum descending behind abruptly to the mesoepinotal

constriction. Epinotum subcuboidal, as broad as long, its base as long as the declivity, the spines small, short and acute, directed upward, not half as long as the distance between their bases. Petiole small, less than twice as long as broad, the node blunt and rounded, not compressed anteroposteriorly. Postpetiole scarcely broader than the petiole, a little broader than long, its sides and dorsal surface rounded. Gaster smaller than the head, broadly elliptical. Legs rather short.

Smooth and shining; the anterior half of the head longitudinally rugulose, the rugules being faint and not very dense; the posterior half of the head with very sparse, piligerous punctures. Epinotum superficially and densely punctate or finely reticulate.

Hairs white, very fine, rather short, suberect, moderately abundant on the body, finer and more appressed on the legs; scapes with a few erect longer hairs on their anterior surfaces.

Honey-yellow; head and mandibles a little darker.

A single specimen taken by Prof. Thaxter near Port of Spain in sweepings.

This form is sufficiently distinct from *Ph. minutula* in the more flattened and much more feebly sculptured head, the smaller eyes, less compressed petiolar node, shorter and sparser pilosity, paler coloration, etc.

Pheidole (Macropheidole) fimbriata Roger.—Port of Spain, (R. Thaxter), ♂, ♀; Caparo, (P. B. Whelpley), ♂, ♀, ♀.

Pheidole (Decapheidole) decem Forel.—Trinidad, (A. Forel), type-locality, ♂.

Crematogaster brevispinosa Mayr var. **minutior** Forel.—Botanical Garden, Port of Spain, (Wheeler), ♀. Nesting in accumulations of carton around spines of two trees of *Acacia cornigera*.

Crematogaster (Orthocrema) brasiliensis Mayr.—Aripa Savanna and Sangre Grande, (R. Thaxter), ♀.

Crematogaster (Orthocrema) limata F. Smith.—Port of Spain, (R. Thaxter), ♀, in sweepings.

Crematogaster (Orthocrema) limata subsp. **parabiotica** Forel.—Trinidad, (Urich), ♀; Port of Spain and Gasparee Island, (R. Thaxter), ♀; Botanical Garden, Port of Spain, (Wheeler), ♀.

Monomorium floricola Jerdon.—Trinidad, (Urich), ♀; Port of Spain, (R. Thaxter), ♀.

Magalomyrmex bituberculatus Forel.—Arima, (Urich), ♀; Port of Spain, (R. Thaxter), ♀.

Tranopelta gilva Mayr.—Port of Spain, (Aug. Busck), ♀ ♂.

Solenopsis altinodis Forel.—Trinidad, (Urich), ♀; Port of Spain, (R. Thaxter), ♀, in sweepings.

Solenopsis basalis Forel var. **urichi** Forel.—Trinidad, (Urich), type-locality, ♀, ♀.

Solenopsis tenuis Mayr.—Port of Spain, (R. Thaxter), ♂.

Solenopsis minutissima Emery.—Trinidad, (R. Thaxter), ♂.

Solenopsis geminata Fabr.—Port of Spain, (R. Thaxter), ♂; Chaguanas (Urich), ♂; Port of Spain, (P. B. Whelpley), ♂; Botanical Garden, Port of Spain, (Wheeler), ♂.

SPELÆOMYRMEX, new genus

WORKER.—Very small, monomorphic. Head moderately large, with convex sides and concave posterior border. Mandibles narrow, their apical borders very oblique, with a few large teeth. Clypeus very short, except in the middle, where it extends back between the frontal carinae, the anterior border sinuous in the middle and on each side with a broad tooth, and with two carinae which curve outwards anteriorly and form sharp borders for the antennal sockets. Frontal groove and area absent; frontal carinae small, short and lobular. Eyes minute, in front of the middle of the head; ocelli absent. Antennae 11-jointed, the funiculi with a very distinct 2-jointed club, as long as the remainder of the funiculus, the terminal joint very long, the first joint also long and stout compared with joints 2-8, which are small and shorter than broad. Thorax rather slender, with very distinct mesoepinotal constriction, angular humeri and the epinotum armed with spines. There is no promesonotal suture. Petiole small, elongate, pedunculate, with a conical node, the ventral surface unarmed. Postpetiole with a very low node. Gaster much smaller than the head, the first segment very large, truncated anteriorly, the remaining segments small and short. Legs long, the femora and tibiae slender basally, clavate distally, the middle and hind tibiae without spurs; tarsal claws simple.

GENOTYPE.—*S. urichi*, new species.

Spelæomyrmex urichi, new species

Figure 1

WORKER.—Length, 1.5 mm.

Head scarcely longer than broad, as broad in front as behind, with evenly convex sides and broadly excised posterior border; in profile somewhat more flattened above than below. Mandibles moderately large, with convex external borders and the oblique apical borders furnished with four large, subequal teeth. Clypeus steep and convex in the middle, depressed on the sides. Eyes consisting of only a few minute, indistinct, pigmented facets, placed at the anterior third of the head. Antennae rather long, their scapes reaching to about half the distance between the eyes and the posterior corners of the head. Basal joint of the funiculus fully twice as long as broad and much longer than joints 2-7, which are fully twice as broad as long, the eighth joint nearly as long as broad; basal joint of club longer than broad, terminal joint three times as long as the basal and rather pointed at the tip. Thorax much narrower than the head, the pro- and mesonotum depressed and very feebly rounded above in profile, the humeri distinctly angular, the inferior angles of the pronotum blunt. Mesoepinotal constriction abrupt and rather long. Epinotum much narrower than the pronotum, subrectangular, broader than long, its base longer than broad, the spines flattened, triangular, somewhat longer than broad, acute, shorter than their distance apart at the base and directed upward and backward. Petiole twice as long as broad, broadened behind, the conical node circular when seen from above and rising rather abruptly from the peduncle, the ventral surface of the segment feebly

convex anteriorly. Postpetiole in profile but little more convex dorsally than ventrally, from above trapezoidal, about twice as broad behind as in front, with straight anterior, posterior and lateral borders. Gaster elliptical, its anterior border straight and transverse, angulate at the sides. Basal halves of femora slender, apical halves incrassated; tibiae, especially the middle and hind pairs, of similar shape.

Subopaque; mandibles coarsely rugose-punctate; sides of clypeus and the cheeks longitudinally rugose; remainder of head, thorax, petiole, and postpetiole reticulate-rugose; middle of clypeus, a large, elongate area just behind the frontal

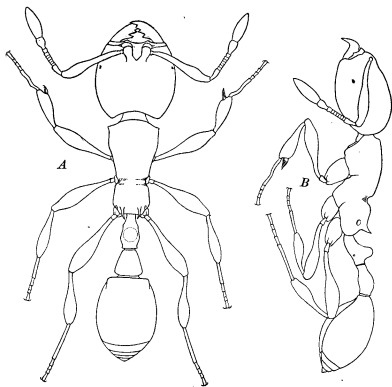


Fig. 1. *Spelæomyrmex urichi*, new genus and new species. Worker. A, dorsal; B, lateral aspect.

carinae, the nodes of the petiole and postpetiole, the gaster and appendages very smooth and shining, with minute, sparse, piligerous punctures. The meshes of the reticulation on the postero-lateral portions of the head and on the pronotum are looser and more longitudinal than on the epinotum and the ventral portions of the petiole and postpetiole.

Hairs pale yellowish, bristly, erect, rather abundant, uneven, covering the body and appendages, conspicuously long on the clypeus, legs, gaster and nodes of petiole and postpetiole. Pubescence absent.

Ferruginous; the antennae, legs, gaster and nodes of the petiole and postpetiole yellow.

Described from eleven specimens found by Mr. F. M. Ulrich living in the guano of the fat-bird (*Steatornis caripensis* Humboldt) in the Guacharo Cave of Trinidad. The pale color, very minute eyes and long bristly pilosity indicate that this is a true cavernicolous ant. It evidently runs down to the tribe Pheidologetini Emery in our tables and is very closely related to *Erebomyrma* Wheeler, but differs markedly in a number of characters, notably in the much larger size of the head, the angulate humeri, the shape of the petiole, postpetiole and legs and the much greater size of the first gastric segment. The discovery of the probably very large male and female phases will probably show that we are concerned either with a very distinct genus or a highly aberrant species of *Erebomyrma*. Perhaps the Texan *E. longi* Wheeler, which is certainly subterranean and has been taken only once (during a nuptial flight), is really a cavernicolous ant. At any rate search should now be made for it in the bat-guano which often accumulates in great masses in many of the caves of Texas.

Leptothorax (Goniothorax) asper Mayr.—Port of Spain, (P. B. Whelpley), ♀.

Leptothorax (Goniothorax) tristani Emery.—Port of Spain, (R. Thaxter), ♀, in sweepings.

Wasmannia auropunctata Roger.—Trinidad, (A. Forel), ♀, ♂; Port of Spain, (R. Thaxter), ♀, ♀; Botanical Garden, Port of Spain, (Wheeler), ♀; Guacharo Cave, (Ulrich), in nesting materials of guacharo (*Steatornis caripensis* Humb.), ♀.

Procryptocerus spiniperdus Forel.—Trinidad, (Ulrich), type-locality, ♀; Port of Spain, (P. B. Whelpley), ♀, ♀.

The female measures nearly 7 mm. and is very similar to the worker but with the pronotum coarsely and evenly reticulate-rugose and the longitudinal rugæ on the mesonotum and base of epinotum coarser. The epinotal spines are stouter and proportionally shorter.

Cryptocerus maculatus F. Smith.—Trinidad, (R. Thaxter), ♀.

Cryptocerus maculatus subsp. **nanus** Forel.—Savanna, (A. Forel) type-locality, ♀; Port of Spain, (P. B. Whelpley), ♀; same locality (R. Thaxter), ♀, in sweepings.

Cryptocerus umbraculatus Fabr.—Port of Spain, (P. B. Whelpley), ♀.

Cryptocerus pusillus Klug.—Aripa Savanna, (R. Thaxter), ♀.

Cryptocerus spinosus Mayr.—Botanical Garden, Port of Spain, (Wheeler), ♀.

Cryptocerus (Zacryptocerus) clypeatus Fabr.—Sangre Grande, (R. Thaxter), ♀; Port of Spain, (U. S. Nat. Mus.), ♀.

Cephalotes atratus L.—Trinidad, (A. Forel), ♂; Port of Spain, (R. Thaxter, P. B. Whelpley, Wheeler), ♂.

Strumigenys eggersi Emery.—Verdant Vale, (Urich), ♂; Port of Spain, (R. Thaxter), ♂, in sweepings.

✓✓ **Strumigenys saliens** Mayr.—Port of Spain, (R. Thaxter), ♂. =

✓✓ **Strumigenys trinidadensis**, new species ←

WORKER.—Length, nearly 3 mm.

Closely related to *S. saliens* Mayr but smaller. Head and mandibles of the same shape and proportions but the occipital excision deeper and the mandibles flatter. The teeth are of the same number and in the same position but differ in length; the denticle at the base of the apical tooth is much smaller and the two on the inner border of the mandibles are very short and acute, the proximal shorter than the distal. Antennal scapes slender, reaching to the beginning of the occipital lobes as in *saliens*; first funicular joint as long as joints 2 and 3 together, which are subequal and distinctly longer than broad; joint 4 nearly as long as joints 1 to 3 together and scarcely more than half as long as the terminal joint. Thorax shaped as in *saliens*, but pro- and mesonotum with a slender, sharp median carina. Epinotum with both superior and metasternal spines, the former somewhat longer than the latter and about half as long as the base of the epinotum, without membranous expansion below. Petiole and postpetiole similar to those of *saliens* but the peduncle of the former passing much more gradually into the distinctly lower node. Postpetiole broader than in *saliens*, being nearly twice as broad as the petiolar node. The spongi-form masses arranged much as in *saliens* but less developed along the ventral surface of the petiole.

Opaque; finely and densely punctate, postpetiole and ventral and apical portions of the gaster smoother and more shining; head more coarsely, pronotum more finely rugose, the rugæ irregular and longitudinal. Gaster very finely and indistinctly shagreened, its extreme base with a regular row of radiating rugules.

Hairs whitish; those on the anterior border of scapes curved and clavate and in a regular series. There are a few erect clavate hairs on the head and thorax and the head has also more numerous small, scattered appressed and rather indistinct scale-like hairs; those on the petiole, postpetiole and gaster are fine, long, erect, abundant and flexuous; mandibles and legs with short, delicate, appressed hairs.

Yellowish brown; mandibles, legs and gaster more yellowish; the teeth on the inner borders of the mandibles black.

Described from a single specimen swept from foliage near Port of Spain by Prof. Roland Thaxter.

This ant is readily distinguished from *S. saliens* by its considerably smaller size, paler color, shorter mandibular teeth, carinate pro- and mesonotum, more finely punctate and more coarsely rugose head and pronotum, lower petiolar node and different abdominal pilosity. It is less closely related to *S. silvestrii* Emery, which is much smaller, paler, with much less deeply excised head and lacks the metasternal spines, though the arrangement of the mandibular teeth is similar.

- Codiomyrmex thaxteri** Wheeler.—Port of Spain, (R. Thaxter), type-locality, ♀, in sweepings.
- Sericomyrmex urichi** Forel.—Trinidad, (Urich), type-locality, ♀; Botanical Garden, Port of Spain, (Wheeler), ♀.
- Apterostigma mayri** Forel.—Trinidad, (Urich), type-locality, ♀; Diego Martin, (Wheeler), ♀, ♀, ♂, fungus gardens under logs in cacao plantation.
- Apterostigma urichi** Forel.—Trinidad, (Urich), type-locality, ♀; Caparo, (R. Thaxter), ♀.
- Apterostigma wasmanni** Forel.—Four Roads, Port of Spain, (R. Thaxter), ♀.
- Myrmecocrypta squamosa** F. Smith.—Port of Spain, (A. Forel), ♂.
- Myocepurus smithi** Forel.—Diego Martin, (Urich), ♀; Botanical Garden, Port of Spain, (Wheeler), ♀.
- Cyphomyrmex rimosus** Spinola.—Botanical Garden, Port of Spain, (Wheeler), ♀, ♀, ♂.
- Cyphomyrmex rimosus** subsp. *minutus* Mayr.—Botanical Garden, Port of Spain, (Wheeler), ♀.

Trachymyrmex cornetzi Forel variety *bivittatus*, new variety

WORKER.—Differing from the typical form from Colombia in having the pale-brownish cloud on each side of the first gastric segment replaced by a very definite dark-brown band, which reaches to the base of the segment and is continued as a band of the same color on the side of the postpetiole. There is no infuscation of the pronotum, but the antennal club, except the tip of its last joint, is dark brown.

Numerous workers from two colonies which I found in the Botanical Garden, Port of Spain (type-locality) and at Coroni. In both places the nests were in clay banks and resembled those of our North American *T. septentrionalis* McCook. I have taken the typical *cornetzi* at Kartabo in British Guiana. Forel has described from Colombia a variety, *naranja*, which is more reddish and with an even feebler development of the brown clouded areas than in the typical form of the species.

- Trachymyrmex humilis** Wheeler.—Gaspree Island and Port of Spain, (R. Thaxter), type-locality, ♀; Botanical Garden, Port of Spain, (Wheeler), ♀.
- Trachymyrmex urichi** Forel.—Trinidad, (Urich), type-locality, ♀; Ariopita Valley, (B. D. Chipman), ♀; Gaspree Island, (R. Thaxter), ♀; Botanical Garden, Port of Spain, (Wheeler), ♀.
- Acromyrmex octospinosus** Reich.—Trinidad, (Günther, Urich, A. Forel), ♀, ♀, ♂; Gaspree Island, (R. Thaxter), ♀; Ariopita Valley, (B. D. Chipman), ♀; Port of Spain, (P. B. Whelpley), ♀; Botanical Garden, Port of Spain, (Wheeler), ♀.

Atta cephalotes L.—Port of Spain and Sewa Valley, (R. Thaxter), ♀; Taberguilla and Port of Spain, (P. B. Whelpley), ♀.

Dolichoderinae

Dolichoderus attelaboides Fabr.—Arima, (Urich), ♀; Port of Spain, (R. Thaxter), ♀.

Dolichoderus decollatus F. Smith.—Port of Spain, (R. Thaxter), ♀.

Dolichoderus (Monacis) bispinosus Olivier.—Port of Spain, (R. Thaxter), ♀, ♀, ♂; Erin, (Urich), ♀; Caparo, (P. B. Whelpley), ♀; Caroni and Botanical Garden, Port of Spain, (Wheeler), ♀.

Dolichoderus (Monacis) debilis Emery.—Matura, (Urich), ♀; Sangre Grande, (R. Thaxter), ♀.

Dolichoderus (Hypoclinea) bidens L.—Tamana, (Urich), ♀; Botanical Garden, Port of Spain, (Wheeler), ♀.

Dolichoderus (Hypoclinea) bidens var. **spurius** Forel.—Trinidad, (Urich), type-locality, ♀.

Dolichoderus (Hypoclinea) championi Forel var. **tæniatus** Forel.—Savanna, (A. Forel), Port of Spain, (R. Thaxter), ♀; Botanical Garden, Port of Spain, (Wheeler), ♀.

Dolichoderus (Hypoclinea) championi subsp. **trinidadensis** Forel.—Trinidad, (Urich), type-locality, ♀; Port of Spain, (R. Thaxter), ♀.

Dolichoderus (Hypoclinea) lutosus F. Smith.—Savanna, (A. Forel), ♀.

Iridomyrmex dispartitus Forel subsp. **micans** Forel.—Port of Spain, (R. Thaxter), ♀.

Azteca alfaroi Emery subsp. **lucidula** Forel.—Trinidad, (Urich), ♀, ♀, ♂; Caroni and Botanical Garden, Port of Spain, (Wheeler), ♀, ♀, in internodes of *Cecropia peltata*.

Azteca barbifex Forel.—Port of Spain, (R. Thaxter), ♀.

Azteca bicolor Emery subsp. **belti** Emery.—Botanical Garden, Port of Spain, (Wheeler), ♀, running on trunks of *Cecropia peltata*.

Azteca chartifex Forel.—Trinidad, (Urich), type-locality, ♀; Arima, (Urich).

Azteca chartifex subsp. **decipiens** Forel var. **lanians** Forel.—Arima, (Urich), ♀, ♀; Botanical Garden, Port of Spain, (Wheeler), ♀, from large, pendent, carton nests on rubber trees.

Azteca constructor Emery.—Botanical Garden, Port of Spain, (Wheeler), ♀, ♀, nesting in internodes of *Cecropia peltata*.

Azteca delpini Forel subsp. **trinidadensis** Forel.—Trinidad, (Urich), type-locality, ♀, ♀; Caroni, (Wheeler), nesting in internodes of *Cecropia peltata*.

- Azteca foreli** Emery subsp. **ursina** Forel.—Trinidad, (Urich), type-locality, ♀, ♂; Chatham, (Urich), ♀.
- Azteca jelskii** Emery.—Trinidad, (Urich), ♀, ♀.
- Azteca trigona** Emery subsp. **mathildæ** Forel var. **spuria** Forel.—Botanical Garden, Port of Spain, (Wheeler), ♀.
- Azteca trigona** subsp. **mediops** Forel.—Port of Spain, (R. Thaxter), ♀; Ariopita Valley, (H. D. Chapman), ♀.
- Azteca velox** Forel.—Arima, (Urich), ♀.
- Azteca velox** Forel var. **nigriventris** Forel.—Port of Spain, (R. Thaxter), ♀.
- Azteca xanthochroa** Roger.—Caroni, (Wheeler), ♀, nesting in internodes of *Cecropia peltata*.
- Tapinoma melanocephalum** Fabr.—Aripa Savanna, (R. Thaxter), ♀; Port of Spain, (P. B. Whelpley), ♀.
- Tapinoma ramulorum** Emery var. **saga** Forel.—Trinidad, (Urich), type-locality, ♀, ♀.
- Tapinoma ramulorum** subsp. **irrectum** Forel var. **cearense** Forel.—Trinidad, (Urich), ♀, ♂.

Formicinæ

- Brachymyrmex heeri** Forel.—Port of Spain, (R. Thaxter), ♀, in sweepings.
- Brachymyrmex minutus** Forel.—Trinidad, (Urich), ♀.
- Prenolepis (Nylanderia) longicornis** Latr.—Sangre Grande, (R. Thaxter), ♀.
- Prenolepis (Nylanderia) cæcilie** Forel.—Caparo, (P. B. Whelpley), ♀.
- Prenolepis (Nylanderia) steinhelli** Forel.—Port of Spain, (P. B. Whelpley), ♀.
- Prenolepis (Nylanderia) vividula** Nyl.—Port of Spain, (R. Thaxter), ♀.
- Prenolepis (Nylanderia) vividula** subsp. **guatemalensis** Forel var. **itinerans** Forel.—Trinidad, (Urich), ♀.
- Camponotus (Dinomyrmex) agra** F. Smith.—Platanal, (Urich), ♀; Caparo, (P. B. Whelpley), ♀.
- Camponotus (Myrmothrix) abdominalis** Fabr.—Trinidad, (A. Forel); Port of Spain, (R. Thaxter, P. B. Whelpley), ♀; Ariopita Valley, (B. D. Chipman), ♀; Botanical Garden, Port of Spain, (Wheeler), ♀, ♀.
- Camponotus (Myrmothrix) femoratus** Fabr.—Port of Spain, (R. Thaxter), ♀.
- Camponotus (Myrmosphincta) urichi** Forel.—Trinidad, (Urich), type locality, ♀.

Camponotus (Myrmobrachys) auricomus Roger.—Botanical Garden, Port of Spain, (Wheeler), ♀.

Camponotus (Myrmobrachys) beebei Wheeler.—Near Port of Spain, (R. Thaxter), ♀.

Camponotus (Myrmobrachys) brettisi Forel.—Trinidad, (A. Forel), ♀.

Camponotus (Myrmobrachys) canescens Mayr.—Botanical Garden, Port of Spain, (Wheeler), ♀.

Camponotus (Myrmobrachys) excisus Mayr.—Port of Spain, (R. Thaxter), ♀.

Camponotus (Myrmobrachys) godmani Forel variety **palliolatus**, new variety

Six minor workers taken near Port of Spain by Prof. R. Thaxter agree closely with Forel's description of the types from Mexico and Central America, except that the tibiae, upper surfaces of the femora and upper surface of the thorax are dark brown; the pigment on the pronotum being aggregated in two large, rather indefinite spots. The posterior portion of the head seems also to be more extensively infuscated than in the typical form.

Camponotus (Myrmobrachys) lindigi Mayr.—Gasperec Island, (R. Thaxter), ♀.

Camponotus (Myrmobrachys) senex F. Smith.—Port of Spain, (R. Thaxter, P. B. Whelpley), ♀.

Camponotus (Myrmobrachys) zoc Forel.—Trinidad, (A. Forel); Ariopita Valley, (B. D. Chipman), ♀.

Camponotus (Myrmamblys) novogrenadensis Mayr.—Botanical Garden, Port of Spain, (Wheeler), ♀.

Camponotus (Myrmocladæcus) rectangularis Emery var. **setipes** Forel, —Trinidad, (Urich), type-locality, ♀.

Camponotus (Myrmocladæcus) latangulus Roger.—Port of Spain, (R. Thaxter), ♀.

Camponotus (Myrmocladæcus) bidens Mayr.—Port of Spain, (R. Thaxter), ♀.

Camponotus (Pseudocolobopsis) clavicapus Forel.—Trinidad, (Urich), type-locality, ♀, ♂.